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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/137,842	08/21/1998	YOUNG SANG BAEK	YHK-007	3333

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EXAMINER

DINH, DUC Q

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 06/18/2003

25

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/137,842

Applicant(s)

BAEK ET AL.

Examiner

DUC Q DINH

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,8,11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7,8,11 and 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Renumbered claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art, hereinafter AAPA (Fig. 1-6, page 1-7), in view of Godfrey et al. (5,736,973).

In reference to renumbered claims 7-8, the AAPA discloses a notebook computer comprises: a system body 20 having main printed circuit board 20B: a panel module 22 comprising a display module 10, timing control board 16, backlight driver unit 26, backlight 64, drivers 12 and 14, printed circuit film 21 for connecting timing control to the drivers, and printed circuit film 11 to connect main printed circuit board 20B with timing control board. The AAPA discloses everything with the exception that that the timing control circuit and backlight driver is integrated into a printed circuit board (see Fig.1 and 3, page 4, lines 9-31 and page 6, lines 14-33). Godfrey discloses an integrated display system in which a backlight driver is integrated with timing circuit in a printed circuit board in Fig. 3 (see col. 4, line 60 – col. 5, line 16).

Art Unit: 2674

It would have been obvious for one of ordinary skill in the art to provide the printed circuit board of Godfrey in the device of the AAPA because it would provide a compact and space efficient circuit for the system.

In addition, absent a showing of critically and/or unexpected result, it would been obvious to one of ordinary skill in the art to integrate the timing control circuit and the backlight driver into a printed circuit board as desired as was judicially recognized In re Murray, 19 C.C.P.A. (Patents) 739, 53 F.2D 541, 11 USPQ 155; In re Zabel et al. , 38 C.C.P.A (Patents) 832, 186 F.2d 735, 88 USPQ 367, which recognizes that the integrating of well known element is normally not desired toward patentable subject matter.

3. Renumbered claims 11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art, hereinafter AAPA (Fig. 1-6, page 1-7), in view of Moriconi (U. S. Patent No. 5,546,098).

In reference to claim 11, Figs. 4 –5 of the AAPA show a notebook computer comprises a display module having a display device 22, drivers 12, 14, backlight 24; a body module 20 having main printed circuit board 20, driving circuit 16, a connecting circuit (flexible printed circuit film 21) that connect between drivers 12 and 14 and driving circuit (timing control board 16), a conductive line 19 connect backlight driver to backlight unit 24. The AAPA discloses everything with the exception that driving circuit is located in the system body rather than the display module as recited. Moriconi discloses that the display circuitry may be located in computer body, and the drivers on display (see Fig. 4).

Art Unit: 2674

It would have been obvious to utilize the teaching of Moriconi, i.e., providing AAPA's display circuitry in the main body of the system because this would allow a variety of different types of display module to be used (col. 2, lines 58-63).

In addition absent a showing of critically and/or unexpected result, it would be obvious to one of ordinary skill in the art to relocate the driving control circuit as desired as was judicially recognized with *IN RE JAPIKEE* USPQ 70 (CCPA 1950), which recognizes that the relocation of well known element is normally not desired toward patentable subject matter.

In reference to renumbered claim 13, the AAPA shows the conductive line 19 in Fig. 3.

In reference to renumbered claim 14, Moriconi does not disclose the driving circuitry includes a timing circuitry and forms a package. It would have been obvious for one of ordinary skill in the art at the time of the invention was made to provide the timing control circuitry in the display circuitry for providing the timing control for the data driver and scanning driver of the LCD display system. In addition, it would be obvious to one of ordinary skill in the art to integrate the timing control circuit in the display circuitry board as desired as was judicially recognized in *re Murray*, 19 C.C.P.A. (Patents) 739, 53 F.2d 541, 11 USPQ 155; *in re Zabel et al.*, 38 C.C.P.A (Patents) 832, 186 F.2d 735, 88 USPQ 367, which recognizes that the integrating of well known element is normally not desired toward patentable subject matter.

In reference to renumbered claims 15-17, the AAPA discloses the display 10 in Fig. 3 and 5 having driving circuit inherently mounted in a circuit board.

In reference to renumbered claims 18-19, Moriconi discloses in Fig. 1 a laptop computer having a keyboard with a matrix display module that can be rotated between an open and closed position.

Response to Argument

Applicant's arguments filed on 3/10/03, pages 5-9, have been fully considered but they are not persuasive. Applicant argues that "although the AAPA does show flexible printed circuit film 11 and 17, neither of these films connect a timing control unit to a driver. Further, this disclosure does not show a module control board having timing control unit for driving driver and backlight driver to drive a backlight unit of a panel module. Neither Moriconi and /or Godfrey disclose a first connecting device, including a flexible printed circuit film that connects a timing control unit with the driver (claim 7). However, the AAPA discloses the printed circuit film 21 that connects the timing control 16 and drivers 12 and 14 as shown in Fig. 3 and page 4, lines 25-32. Also, it would be obvious to one of ordinary skill in the art to integrate the timing control circuit and the backlight driver into a printed circuit board as desired as was judicially recognized In re Murray, 19 C.C.P.A. (Patents) 739, 53 F.2D 541, 11 USPQ 155; In re Zabel et al. , 38 C.C.P.A (Patents) 832, 186 F.2d 735, 88 USPQ 367, which recognizes that the integrating of well known element is normally not desired toward patentable subject matter.

In response to the argument cited none of the cited art discloses a flexible printed circuit film that connect the drivers and a driving circuit and a module control board that drives the drivers in the display module and a backlight unit (claims 13-19). Refer to the above argument for the printed circuit film that connects the drivers and a driving circuit. In addition, Moriconi discloses that the display circuitry may be located in one module, and the scanning drivers and data drivers are located on another module (see Fig. 4). It would having obvious to utilize the teaching of Moriconi, i.e., providing AAPA's and Godfrey display circuitry in the main body of the system because this would allow the a variety of different types of display module to be used

Art Unit: 2674

(col. 2, lines 58-63). In addition absent a showing of critically and/or unexpected result, it would be obvious to one of ordinary skill in the art to relocate the timing control circuit and the backlight driver unit to the main control board in the body portion of the system as desired as was judicially recognized with *IN RE JAPIKEE* USPQ 70 (CCPA 1950), which recognizes that the relocation of well known element is normally not desired toward patentable subject matter.

For the above reasons, it is believed that the rejections should be maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q DINH** whose telephone number is **(703) 306-5412**. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, Va Sixth Floor (Receptionist)

Art Unit: 2674

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

DUC Q DINH
Examiner
Art Unit 2674

DQD
May 30, 2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600